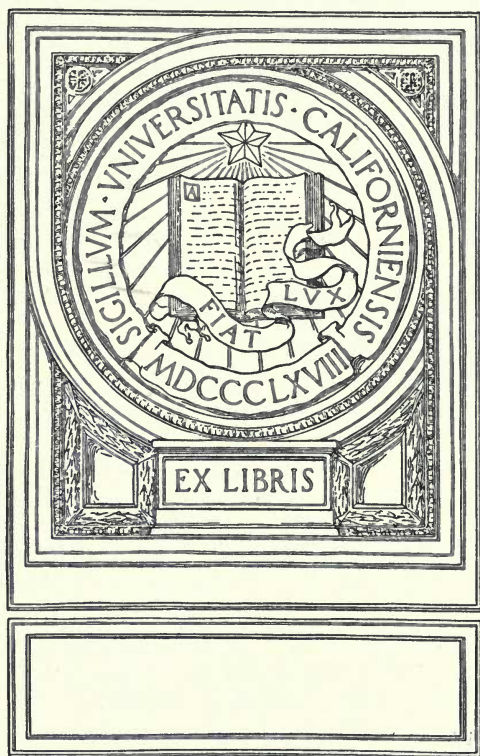
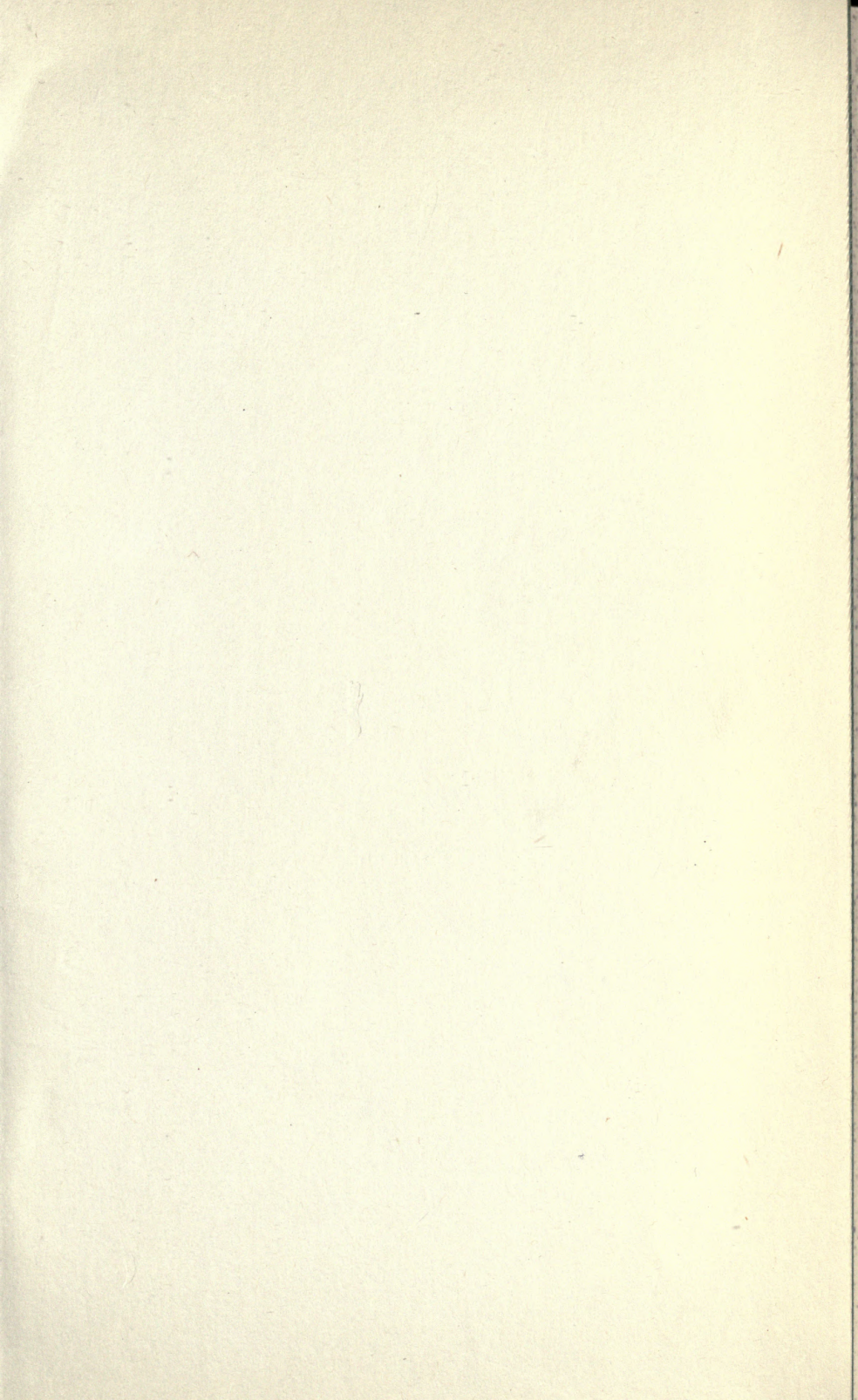


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1911-1922



*The System of Practical Coöperation between Science and Industry
Founded by Robert Kennedy Duncan*

PITTSBURGH, PENNSYLVANIA
1922

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PREFATORY NOTE

THE present bulletin, the first in Mellon Institute's "Bibliographic Series", commemorates the tenth anniversary of the establishment of the Industrial Fellowship System at the University of Pittsburgh. One of the provisions of the foundation of the Institute is the dissemination of information concerning investigations carried out under its auspices; and the following list presents the published contributions to scientific and technical literature from the inauguration of the System at the University of Pittsburgh on March 1, 1911, to January 1, 1922.

The compilation has been done in the Library of the Institute by Mrs. Clara Guppy Stateler, and the style is that usually followed in bibliography. No list of the abbreviations of the titles of the periodicals cited is included for the reason that the standard journal list of the American Chemical Society has been complied with.

WILLIAM A. HAMOR,
Assistant Director.

August 1, 1922.

Copies of reprints of journal contributions listed in this Bulletin may be obtained, when available, by application to the Director of Mellon Institute, who will also furnish any additional information regarding the activities of the Institute.

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"Linseed-Oil Substitutes."
1,382,345. June 21, 1921.

"Method of Recovering Resins from Benzol-Plant Residues."
1,236,917. Aug. 14, 1917.

"Paint or Varnish and Method of Making the Same."
1,315,658. Sept. 9, 1919.

"Paint or Varnish and Method of Making the Same."

1,370,195. March 1, 1921.

"Paint or Varnish and Paint or Varnish Ingredient."

1,296,776. March 11, 1919.

"Resin."

1,326,579. Dec. 30, 1919.

"Resin and Process for Manufacturing the Same from Crude Solvent Naphtha."

1,297,328. March 18, 1919.

"Turpentine Substitute."

1,340,600. May 18, 1920.

See Sperr, Frederick William, Jr., and Darrin, Marc.

DAVIS, Harold Simmonds:

See Bacon, Raymond Foss, and Davis, Harold Simmonds.

DAVIS, Harold Simmonds, and DAVIS, Mary Davidson:

"Apparatus for the Estimation of Vapor-Pressure."

1,318,362. Oct. 14, 1919.

DAVIS, Harold Simmonds, and HAMOR, William Allen:

"Distillation of Sulfur."

1,398,960. Dec. 6, 1921.

DAVIS, Harold Simmonds, and SEMENOW, Saul D.:

"Purification of Liquids."

1,323,251. Dec. 2, 1919.

DAVIS, Mary Davidson:

See Davis, Harold Simmonds, and Davis, Mary Davidson.

ESSEX, Harry:

See Brooks, Benjamin Talbot, and Essex, Harry.

See Brooks, Benjamin Talbot; Essex, Harry; and Smith, Dillon Farris.

See Hibbert, Harold; Essex, Harry; and Brooks, Benjamin Talbot.

See Smith, Dillon Farris, and Essex, Harry.

ESSEX, Harry, and BROOKS, Benjamin Talbot:

"Process of Making Amyl Acetate."

1,197,109. Sept. 5, 1916.

ESSEX, Harry, and HUMPHREY, Irvin Wesley:

"Process of Purifying Amyl Compounds."

1,233,333. July 17, 1917.

GARNER, James Bert:

"Absorbent Material and Process of Producing the Same."

1,262,770. April 16, 1918.

"Process of Obtaining Gasoline from Hydrocarbon Gases."

1,299,455. April 8, 1919.

"Recovery of Sulfur Dioxid."

1,145,579. July 6, 1915.

See Anderson, James B.; Garner, James Bert; and Shaner, George A.

See Zimmers, David F.; Jessop, Earle N.; Koenig, Walter J.; and Garner, James Bert.

GARNER, James Bert, and CLAYTON, Howard Dimock:

"Manufacture of Chlorinated Hydrocarbons."

1,262,769. April 16, 1918.

"Manufacture of Hydrochloric Acid."

1,220,411. March 27, 1917.

"Utilization of Sulfur Dioxid."

1,173,566. Feb. 29, 1916.

"Utilization of Sulfur Dioxid." Reissue.

14,277. March 27, 1917.

GARNER, James Bert, and COOPER, Howell Carnaghan:

"Process of Obtaining Gasoline from Natural Gas."

1,332,290. March 2, 1920.

"Recovery of Butane and Propane."

1,307,353. June 24, 1919.

GODFREY, Truman Milo:

See Kohman, Henry Adolph; Godfrey, Truman Milo; and Ashe, Lauren Hewitt.

See Kohman, Henry Adolph; Hoffman, Charles; and Godfrey, Truman Milo.

HAMOR, William Allen:

See Davis, Harold Simmonds, and Hamor, William Allen.

HAMOR, William Allen, and TRIGG, Charles Wilderman:

"Process for Preserving Fugacious Components of Foods."

1,292,458. Jan. 28, 1919.

HEDENBURG, Oscar Fred:

"Dry Lime and Sulfur Product and Making Same."

1,336,957. Apr. 13, 1920.

HEDENBURG, Oscar Fred, and PRATT, David Shepard:

"Method of Making Arsenate of Lead."

1,344,035. June 22, 1920.

HIBBERT, Harold:

"Explosive and Method of Producing Same."

1,213,369. Jan. 23, 1917.

"Explosive Composition and Method of Producing Same."

1,231,351. June 26, 1917.

"Liquid Composition."

1,213,368. Jan. 23, 1917.

"Manufacture of Explosives."

1,213,367. Jan. 23, 1917.

"Manufacture of Glycols."

1,270,759. June 25, 1918.

"Manufacture of Organic Solvents."

1,158,217. Oct. 26, 1915.

"Method of Condensing Polyhydric Alcohols."

1,126,467. Jan. 26, 1915.

"Method of Preparing Acetaldehyde."

1,247,270. Nov. 20, 1917.

"Process for the Synthesis of Organic Condensation Products."

1,261,811. April 9, 1918.

"Process of Making Acetic Acid."

1,230,899. June 26, 1917.

"Purification of Acetyl-Salicylic Acid."

1,321,307. Nov. 11, 1919.

"Solvent and Process of Producing the Same."

1,283,183. Oct. 29, 1918.

HIBBERT, Harold; ESSEX, Harry; and BROOKS, Benjamin Talbot:

"Process for the Manufacture of Fusel Oil or Similar Products from Petroleum."

1,214,919. Feb. 6, 1917.

HIBBERT, Harold, and MORTON, Harold Arthur:

"Method of Making Acetaldehyde."

1,213,486. Jan. 23, 1917.

"Method of Making Acetaldehyde."

1,213,487. Jan. 23, 1917.

HOFFMAN, Charles:

See Kohman, Henry Adolph; Hoffman, Charles; and Blake, Alfred Edward.

See Kohman, Henry Adolph; Hoffman, Charles; and Godfrey, Truman Milo.

HOLDEN, Hiram Chester:

"Process of Obtaining Starch."

1,221,990. April 10, 1917.

HUMPHREY, Irvin Wesley:

See Brooks, Benjamin Talbot, and Humphrey, Irvin Wesley.

See Essex, Harry, and Humphrey, Irvin Wesley.

IRVIN, Robert Roy:

See Kohman, Henry Adolph, and Irvin, Robert Roy.

See Kohman, Henry Adolph; Irvin, Robert Roy; and Cross, Robert John.

JESSOP, Earle Noble.

See Zimmers, David F.; Jessop, Earle N.; Koenig, Walter J.; and Garner, James Bert.

KOENIG, Walter J.:

See Zimmers, David F.; Jessop, Earle N.; Koenig, Walter J.; and Garner, James Bert.

KOHMAN, Henry Adolph:

"Ferment and Process for Producing and Preserving the Same."

1,149,839. Aug. 10, 1915.

"Manufacture of Leavened Bread."

1,274,898. Aug. 6, 1918.

KOHMAN, Henry Adolph; GODFREY, Truman Milo; and ASHE, Lauren Hewitt:

"Comminuted Edible Fat for Shortening Purposes and Method of Making the Same."

1,326,276. Dec. 30, 1919.

"Leavened Bread."

1,204,281. Nov. 7, 1916.

"Manufacture of Bread."

1,204,280. Nov. 7, 1916.

"Manufacture of Bread."

1,222,304. Apr. 10, 1917.

"Method of Comminuting Hard Fats."

1,323,367. Dec. 2, 1919.

"Method of Producing a Shortening Composition."

1,242,884. Oct. 9, 1917.

"Shortening Composition and Method of Producing the Same."

1,242,883. Oct. 9, 1917.

KOHMAN, Henry Adolph; HOFFMAN, Charles; and BLAKE, Alfred Edward:

"Bread-Making Composition."

1,282,867. Oct. 29, 1918.

"Bread-Making Composition."

1,282,868. Oct. 29, 1918.

"Manufacture of Bread."

1,158,933. Nov. 2, 1915.

"Manufacture of Bread."

1,158,934. Nov. 2, 1915.

KOHMAN, Henry Adolph; HOFFMAN, Charles; and GODFREY, Truman Milo:

"Manufacture of Bread."

1,203,361. Oct. 31, 1916.

"Manufacture of Bread."

1,148,328. July 27, 1915.

"Manufacture of Bread."

1,148,329. July 27, 1915.

"Mineral Water for Use in the Manufacture of Leavened Bread."

1,213,210. Jan. 23, 1917.

"Yeast-Saving Composition in Bread Making."

1,151,526. Aug. 24, 1915.

KOHMAN, Henry Adolph, and IRVIN, Robert Roy:

"Manufacture of Leavened Bread."

1,345,680. July 6, 1920.

KOHMAN, Henry Adolph; IRVIN, Robert Roy; and CROSS, Robert John:

"Manufacture of Leavened Bread."

1,325,327. Dec. 16, 1919.

KOHR, Abram Allison:

See Sperr, Frederick William, Jr., and Kohr, Abram Allison.

LIDDLE, Leonard Merritt:

"Soap."

1,377,843. May 10, 1921.

McDERMOTT, Frank Alexander:

"Process of Extracting Oils from the Peel of Citrus Fruits."

1,353,169. Sept. 21, 1920.

MALCOLMSON, James Donovan:

"Manufacture of Adhesives."

1,379,639. May 31, 1921.

MEYERS, Herbert Henry:

"Contact Process for Making Sulfuric Acid."

1,314,280. Aug. 26, 1919.

"Manufacture of Chlorin."

1,311,175. July 29, 1919.

"Method of Treating Phosphate Rock."

1,246,636. Nov. 13, 1917.

MONTGOMERY, Robert Joseph:

See Sperr, Frederick William, Jr., and Montgomery, Robert Joseph.

MORTON, Harold Arthur:

"Method of Regenerating Mercury Catalysts."

1,293,863. Feb. 11, 1919.

"Process of Making Acetone."

1,315,525. Sept. 9, 1919.

See Hibbert, Harold, and Morton, Harold Arthur.

MORTON, Harold Arthur, and NICOLET, Ben Harry:

"Method of Preparing Paracetaldehyde."

1,300,451. Apr. 15, 1919.

NESBIT, Arthur Fleming:

See Strong, William Walker, and Nesbit, Arthur Fleming.

NICOLET, Ben Harry:

See Bacon, Raymond Foss, and Nicolet, Benjamin Harry.

See Morton, Harold Arthur, and Nicolet, Ben Harry.

PADGETT, Fred Warde:

See Brooks, Benjamin Talbot, and Padgett, Fred Warde.

PALMER, Charles Skeele:

"Process and Apparatus for Making Natural Gas Substitute."

1,268,763. June 4, 1918.

"Process of Treating Petroleum Residues."

1,187,380. June 13, 1916.

"Process of Treating Petroleum Residues, etc."

1,313,009. Aug. 12, 1919.

"Secondary Storage Battery and Method of Making the Same."

1,251,412. Dec. 25, 1917.

PERKINS, Clement Linwood:

- "Concentration of Minerals."
1,394,640. Oct. 25, 1921.
- "Flotation Agent."
1,394,639. Oct. 25, 1921.
- "Flotation of Minerals."
1,240,597. Sept. 18, 1917.
- "Flotation of Minerals."
1,240,598. Sept. 18, 1917.
- "Flotation of Minerals."
1,240,599. Sept. 18, 1917.
- "Flotation of Minerals."
1,302,966. May 6, 1919.
- "Flotation of Minerals."
1,322,816. Nov. 25, 1919.
- "Flotation of Minerals."
1,364,304. Jan. 4, 1921.
- "Flotation of Minerals."
1,364,305. Jan. 4, 1921.
- "Flotation of Minerals."
1,364,306. Jan. 4, 1921.
- "Flotation of Minerals."
1,364,858. Jan. 4, 1921.
- "Method and Appliance for Separating Laminated and Fibrous Minerals."
1,243,096. Oct. 16, 1917.

PERKINS, Clement Linwood, and SAYRE, Ralph Ernest:

- "Flotation of Minerals."
1,364,307. Jan. 4, 1921.
- "Flotation of Minerals."
1,364,308. Jan. 4, 1921.
- "Flotation of Minerals."
1,364,859. Jan. 4, 1921.
- "Flotation of Minerals."
1,370,357. March 1, 1921.

PERKINS, Harry Franklin:

- "Fractionating Apparatus."
1,386,020. Aug. 2, 1921.

PRATT, David Shepard:

- "Fungicide and Insecticide and Method of Producing the Same."
1,374,951. April 19, 1921.

See Hedenburg, Oscar Fred, and Pratt, David Shepard.

PRATT, David Shepard, and TRIGG, Charles Wilderman:

- "Method of Adding Segregated Aromas to Coffee Extract."
1,367,716. Feb. 8, 1921.
- "Method of Making Water-Soluble Coffee Extract and the Product."
1,367,715. Feb. 8, 1921.

REDMAN, Lawrence Vincent:

- "Composition of Matter and Process of Producing the Same."
1,107,703. Aug. 18, 1914.
- "Condensation Product and Method of Preparing Same."
1,188,014. June 20, 1916.
- "Plastic Composition and Process of Making Same."
1,209,333. Dec. 19, 1916.

ROSE, Reed Phillips:

"Production of a Nitrogenous Fertilizer from Leather Waste."
1,255,643. Feb. 5, 1918.

SAYRE, Ralph Ernest:

"Flotation of Minerals."
1,370,366. March 1, 1921.

"Flotation of Minerals."
1,370,367. March 1, 1921.

"Flotation of Minerals."
1,370,843. March 8, 1921.

"Flotation of Minerals."
1,378,562. May 17, 1921.

See Perkins, Clement Linwood, and Sayre, Ralph Ernest.

SCHOLES, Samuel Ray:

"Glass-Melting Receptacle."
1,200,889. Oct. 10, 1916.

SHANER, George A.:

See Anderson, James B.; Garner, James Bert; and Shaner, George A.

SMITH, Dillon Farris, and ESSEX, Harry:

"Process of Making Aluminum Chlorid."
1,270,226. June 18, 1918.

See Brooks, Benjamin Talbot; Essex, Harry; and Smith, Dillon Farris.

See Brooks, Benjamin Talbot, and Smith, Dillon Farris.

SMITH, Henry Sidney, and CURME, George Oliver, Jr.:

"Solvent for Acetylene."
1,332,525. March 2, 1920.

SPERR, Frederick William, Jr.:

"Distillation-Tube."
1,303,980. May 20, 1919.

"Manufacture of Ammonium Sulfate."
1,310,306. July 15, 1919.

"Material for the Destruction of Noxious Animal and Vegetable Life."
1,366,293. Jan. 18, 1921.

"Method of Treating Liquid Distillates."
1,246,671. Nov. 13, 1917.

"Paint and Method of Making Same."
1,275,778. Aug. 13, 1918.

"Recovering Cyanogen and Sulfur Compounds from Fluids."
1,213,429. Jan. 23, 1917.

SPERR, Frederick William, Jr., and DARRIN, Marc:

"Apparatus for Polymerizing Liquids by Means of Heat and Pressure."
1,314,613. Sept. 2, 1919.

"Manufacture of Resins."
1,263,813. April 23, 1918.

"Paint or Varnish and Method of Making the Same."
1,292,907. Jan. 28, 1919.

"Paint or Varnish and Method of Making the Same."
1,292,908. Jan. 28, 1919.

SPERR, Frederick William, Jr., and KOHR, Abram Allison:

"Apparatus for Determining Soluble Gas Constituents."
1,316,602. Sept. 23, 1919.

SPERR, Frederick William, Jr., and MONTGOMERY, Robert Joseph:

"Cement."
1,221,618. April 3, 1917.

STOCKTON, Frank Webb:

"Method of Purifying Cotton-Seed Hull Fiber."
1,295,078. Feb. 18, 1919.

STRONG, William Walker:

"Automatic Regulating Apparatus for Electrical Precipitation Systems."
1,120,560. Dec. 8, 1914.

"Device for Detecting Suspended Matter in Gases."
1,070,556. Aug. 19, 1913.

"Method of Collecting Particles Present in an Ionized Medium."
1,096,765. May 12, 1914.

"Smoke and Fume Recorder."
1,071,532. Aug. 26, 1913.

STRONG, William Walker, and NESBIT, Arthur Fleming:

"Art of Separating Finely-Divided Particles of Solids or Liquids from a Gas."
1,120,561. Dec. 8, 1914.

"Means for Removing Particles of Suspended Matter from Bodies of Fluid and the Like."
1,117,531. Nov. 17, 1914.

"Means for Removing Particles of Suspended Matter from Bodies of Gas or Fluid."
1,119,469. Dec. 1, 1914.

TRESSLER, Donald Kiteley:

"Manufacture of Liquid Glue."
1,394,653. Oct. 25, 1921.

"Manufacture of Liquid Glue."
1,394,654. Oct. 25, 1921.

TRIGG, Charles Wilderman:

"Process for Recovery of Aromatic and Flavoring Constituents."
1,367,724. Feb. 8, 1921.

"Process for Recovery of Escaping Aromas of Food, etc."
1,367,725. Feb. 8, 1921.

"Recovery of Aromas, etc., Escaping During Comminution of Coffee-Beans."
1,367,726. Feb. 8, 1921.

See Hamor, William Allen, and Trigg, Charles Wilderman.

See Pratt, David Shepard, and Trigg, Charles Wilderman.

UHLINGER, Roy H.:

See Brownlee, Roy Hutchison, and Uhlinger, Roy H.

VOGT, Clarence C.:

"Temporary Dental Cement or Stopping."
1,326,552. Dec. 30, 1919.

WEIDLEIN, Edward Ray:

"Hydrometallurgical Apparatus for the Recovery of Copper."
1,223,454. April 24, 1917.

"Hydrometallurgy of Copper."
1,089,096. March 3, 1914.

"Hydrometallurgy of Copper."
1,201,899. Oct. 17, 1916.

WENRICH, Calvin Naftziner:

See Bacon, Raymond Foss, and Wenrich, Calvin N.

YOUNG, James Howard:

"Coating Material."
1,327,933. Jan. 13, 1920.

"Fire-Resisting Asphalt or Like Hydrocarbonaceous Material."
1,398,991. Dec. 6, 1921.

"Protected Metal Article."
1,366,999. Feb. 1, 1921.

ZIMMERS, David F.; JESSOP, Earle N.; KOENIG, Walter J.; and GARNER, James B.:
"Process of Manufacturing Carbon Black."
1,307,430. June 24, 1919.

FOREIGN PATENTS¹

ARGENTINE PATENTS

GARNER, James Bert, and COOPER, Howell Carnaghan:

"Naphtha from Natural Gas."
14,204. Jan. 30, 1918.

WEIDLEIN, Edward Ray:

"Hydrometallurgy of Copper."
11,462. Aug. 12, 1914.

"Hydrometallurgy of Copper."
13,724. May 23, 1917.

AUSTRALIAN PATENT

WEIDLEIN, Edward Ray:

"Hydrometallurgy of Copper."
13,409. Oct. 27, 1913.

BELGIAN PATENT

WEIDLEIN, Edward Ray;

"Hydrometallurgy of Copper."
275,919. Aug. 14, 1916.

CANADIAN PATENTS

BROWNLEE, Roy Hutchison, and UHLINGER, Roy Herman:

"Hydrogen and Carbon Black Production."
158,273. Oct. 13, 1914.

COOPER, Howell Carnaghan:

See Garner, James Bert, and Cooper, Howell Carnaghan.

CORLISS, Harry Percival:

"Mineral Flotation."
179,271. Sept. 11, 1917.

"Mineral Flotation."
179,272. Sept. 11, 1917.

CURME, George Oliver, Jr.:

"Production of Ethylene Dichlorid."
203,124. Aug. 17, 1920.

"Production of Synthetic Acetylene."
199,197. Apr. 13, 1920.

"Propylene Dichlorid."
203,125. Aug. 17, 1920.

"Separation of Gaseous Hydrocarbon Mixtures."
203,126. Aug. 17, 1920.

See Smith, Henry Sidney, and Curme, George Oliver, Jr.

DARRIN, Marc:

"Paint."
195,043. Dec. 16, 1919.

"Paint or Varnish."
198,630. March 30, 1920.

"Resin Manufacture."
194,081. Nov. 18, 1919.

"Resin Production."
179,702. Oct. 9, 1917.

See Sperr, Frederick William, Jr., and Darrin, Marc.

¹This list of foreign patents is incomplete. A revision of it will therefore be published in a later bulletin in this series.

- GARNER, James Bert:
 "Gas Purification."
 184,817. June 11, 1918.
 "Gasoline Production."
 178,938. Aug. 28, 1917.
- GARNER, James Bert, and COOPER, Howell Carnaghan:
 "Naphtha Production."
 178,313. July 24, 1917.
 "Propane and Butane Recovery."
 178,312. July 24, 1917.
- GARNER, James Bert, and PRESTON, Sylvester Cosgrave:
 "Process of Recovering Gasoline from Natural Gas."
 205,312. Nov. 2, 1920.
- HIBBERT, Harold:
 "Acetaldehyde Production."
 181,657. Jan. 15, 1918.
 "Solvent."
 171,961. Sept. 19, 1916.
- HIBBERT, Harold, and MORTON, Harold Arthur:
 "Acetaldehyde Production."
 181,655. Jan. 15, 1918.
 "Acetaldehyde Production."
 181,656. Jan. 15, 1918.
- MORTON, Harold Arthur, and NICOLET, Ben Harry:
 "Paracetaldehyde Manufacture."
 191,914. July 29, 1919.
- NICOLET, Ben Harry:
 See Morton, Harold Arthur, and Nicolet, Ben Harry.
- PALMER, Charles Skeele:
 "Gas Manufacture."
 189,403. April 1, 1919.
- PERKINS, Clement Linwood:
 "Flotation of Minerals."
 180,528. Nov. 20, 1917.
 "Flotation of Minerals."
 180,529. Nov. 20, 1917.
- REDMAN, Lawrence Vincent:
 "Condensation System."
 160,683. Feb. 16, 1915.
 "Varnish, etc."
 160,682. Feb. 16, 1915.
- SMITH, Henry Sidney, and CURME, George Oliver, Jr.:
 "Solvent for Acetylene and the Like."
 203,094. Aug. 17, 1920.
- SPERR, Frederick William, Jr.:
 "Distillation Tube."
 197,542. Feb. 24, 1920.
 "Manufacture of Ammonia Sulphate."
 201,471. June 29, 1920.
- SPERR, Frederick William, Jr., and DARRIN, Marc:
 "Paint."
 184,033. Apr. 30, 1918.

"Resin Manufacture."
184,890. June 11, 1918.

UHLINGER, Roy Herman:

See Brownlee, Roy Hutchison, and Uhlinger, Roy Herman.

WEIDLEIN, Edward Ray:

"Hydrometallurgy of Copper."
173,040. Nov. 7, 1916.

YOUNG, James Howard:

"Coating Material."
205,164. 1920.

"Protected Metal Article."
213,288. 1921.

CHILIAN PATENTS

BACON, Raymond Foss:

"Recovery of Cuprous Sulfid from Ores and the Like."
3,270. Aug. 8, 1915.

"Recovery of Cuprous Sulfid from Ores and the Like."
3,271. Aug. 8, 1915.

WEIDLEIN, Edward Ray:

"Hydrometallurgy of Copper."
3,501. Dec. 21, 1916.

ENGLISH PATENTS

BROWNLEE, Roy Hutchison, and UHLINGER, Roy Herman:

"Improved Manufacture of Nitrogen and Carbon Dioxide."
5,097. April 3, 1916.

DARRIN, Marc:

"Improved Manufacture of Paint or Varnish."
129,264. Sept. 13, 1920.

"Improved Manufacture of Paints and Varnishes."
138,068. June 30, 1921.

"Improved Manufacture of Resin."
132,229. Sept. 24, 1920.

"Improved Manufacture of Resins from Benzol Plant Residues."
112,419. Oct. 1, 1917.

See Sperr, Frederick William, Jr., and Darrin, Marc.

REDMAN, Lawrence Vincent:

"Improved Manufacture of Condensation Products of Phenol and Substances Containing the Methylene Radical."
9,291. April 8, 1915.

SCHOLLES, Samuel Ray:

"Improved Manufacture of Potassium Compounds."
117,755. Aug. 1, 1918.

SPERR, Frederick William, Jr., and DARRIN, Marc:

"Improved Manufacture of Paint or Varnish."
118,079. Dec. 16, 1918.

"Improved Manufacture of Resins."
123,806. March 3, 1919.

STRONG, William Walker:

"Device for Detecting Suspended Matter in Gases."
21,199. May 22, 1913.

UHLINGER, Roy Herman:

See Brownlee, Roy Hutchison, and Uhlinger, Roy Herman.

WEIDLEIN, Edward Ray:

"Improvements in or Relating to the Extraction of Copper."
10,500. Oct. 27, 1913.

"Extraction of Copper."
101,339. Aug. 31, 1915.

YOUNG, James Howard:

"Coating Material."
132,522. 1920.

FRENCH PATENTS

DARRIN, Marc:

"Paint or Varnish and Paint or Varnish Ingredient."
500,835. 1919.

"Resin and Process for Manufacturing the Same from Crude Solvent Naphtha."
501,186. 1919.

See Sperr, Frederick William, Jr., and Darrin, Marc.

SPERR, Frederick William, Jr., and DARRIN, Marc:

"Manufacture of Resins."
491,997. 1918.

WEIDLEIN, Edward Ray:

"Hydrometallurgy of Copper."
473,964. June 23, 1914.

"Hydrometallurgy of Copper."
482,552. Aug. 11, 1916.

YOUNG, James Howard:

"Coating Material."
503,715. 1920.

"Protected Metal Article."
529,908. 1921.

GERMAN PATENTS

BACON, Raymond Foss:

"Recovery of Cuprous Sulfid from Ores and the Like."
307,565. Jan. 20, 1915.

WEIDLEIN, Edward Ray:

"Hydrometallurgy of Copper."
293,967. May 2, 1914.

ITALIAN PATENTS

COOPER, Howell Carnaghan:

See Garner, James Bert, and Cooper, Howell Carnaghan.

GARNER, James Bert:

"Gasoline from Natural Gas."
168,070. Dec. 21, 1918.

GARNER, James Bert, and COOPER, Howell Carnaghan:

"Gasoline from Natural Gas."
168,069. Dec. 21, 1918.

JAPANESE PATENTS

COOPER, Howell Carnaghan:

See Garner, James Bert, and Cooper, Howell Carnaghan.

DARRIN, Marc:

"Paint or Varnish and Paint or Varnish Ingredient."
47,842. 1919.

"Resin and Process for Manufacturing the Same from Crude Solvent Naphtha."
47,952. 1919.

See Sperr, Frederick William, Jr., and Darrin, Marc.

GARNER, James Bert:

"Gasoline from Hydrocarbon Gases."
32,868. June 19, 1918.

GARNER, James Bert, and COOPER, Howell Carnaghan:

"Volatile Oil from Natural Gas."
32,856. June 17, 1918.

SPERR, Frederick William, Jr., and DARRIN, Marc:

"Manufacture of Resins."
34,043. 1918.

MEXICAN PATENTS

BACON, Raymond Foss:

"Recovery of Cuprous Sulfid from Ores and the Like."
15,495. Jan. 25, 1916.

"Recovery of Cuprous Sulfid from Ores and the Like."
15,496. Jan. 17, 1916.

COOPER, Howell Carnaghan:

See Garner, James Bert, and Cooper, Howell Carnaghan.

GARNER, James Bert:

"Gasoline from Hydrocarbon Gases."
16,659. July 7, 1917.

GARNER, James Bert, and COOPER, Howell Carnaghan:

"Propane and Butane."
16,855. Oct. 10, 1917.

"Propane and Butane Apparatus."
16,856. Oct. 10, 1917.

"Naphtha from Natural Gas."
16,857. Oct. 10, 1917.

GARNER, James Bert, and PRESTON, S. C.:

"Gasoline from Natural Gas."
18,606. Nov. 5, 1919.

NEW ZEALAND PATENT

YOUNG, James Howard:

"Protected Metal Article."
45,401. 1921.

PERUVIAN PATENTS

BACON, Raymond Foss:

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